

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

Amend the paragraph beginning on page 3, line 3 as follows:

A method addressing this problem is to bond the heat-resistant adhesive film onto the metal foil using a double-belt press machine schematically illustrated in Figure 4. A protective film 11, a metal foil 12, and a heat-resistant adhesive film 13 are thermally laminated by a metal belt 14 in a heating section 8 and then cooled in a cooling section 9. Thereafter, the protective film 11 is delaminated, which completes the manufacture of the flexible laminate substrate 15. See Japanese Unexamined Patent Publication (Tokukai) 2001-129919.

Amend the paragraph beginning on page 3, line 13 as follows:

The method fails, however, if the metal belt 14 is damaged even partly; the laminator cannot retain pressure uniformity in thermal lamination. To avoid this, time-consuming maintenance is needed frequently in which the entire surface of the metal belt 14 is polished for planarization of the surface. Furthermore, the maintenance leads to extra equipment cost.

Amend the paragraph beginning on page 4, line 3 as follows:

Referring to the schematic illustration in Figure 5, the creases on the surface of the flexible laminate substrate 15 can be reduced by sandwiching a protective film (e.g. polyimide film) 11 between metal rolls 4 and a heat-resistant adhesive film 13 and between the metal rolls 4 and the metal foil 12 during ~~thermally laminate~~ thermal lamination. See, for example, Japanese

Unexamined Patent Publication (Tokukai) 2001-129918. According to the method, the protective film 11 acts as such a buffer that the metal rolls 4 can apply uniform pressure during thermal lamination. In addition, the intervening protective film 11 provides protection to the surface of the metal rolls 4. The film 11 restricts quick thermal expansion of material and hence crease development because the laminate substrate is fixedly attached to the film 11.

Amend the paragraph beginning on page 9, line 13 as follows:

To delaminate the protective film 1 smoothly, the laminate needs to be under some tension. Under increased tension, the flexible laminate substrate experiences high tension also immediately after thermal lamination, which would result in improper appearance and dimensions of the flexible laminate substrate. Therefore, in the present invention, the tension on the flexible laminate 7 immediately after thermal lamination and the tension on the flexible laminate 7 when the protective film 1 is being delaminated are regulated to suitable levels. Hence, the laminate 7, hot after lamination, is gradually cooled down without being placed under high tension. The flexible laminate substrate 5 will less likely be distorted. Also, because of the reduced distortion of the flexible laminate substrate 5, the substrate 5 will less likely deform when it is freed from the distortion after the metal foil 2 is partly removed from the substrate 5. These factors improve the dimensional stability of the flexible laminate substrate 5. The protective film 1 is smoothly delaminated by specifying the tension on the laminate 7 when the protective film 1 is being delaminated to a higher level than before delamination. The flexible laminate substrate 5 will less likely develop creases and other defects in appearance. Thus, in the

present invention, the flexible laminate substrate 5 can be manufactured with improved appearance and dimensional stability after the removal of the metal foil 2. Here, the nip rolls 6 is are used as tension varying means; the means may be implemented in any other way.

Amend the paragraph beginning on page 11 line 13 as follows:

The tension on the laminate 7 after having passed the metal rolls 4 is preferably from 10 N/m to 200 N/m inclusive. If the tension on the laminate 7 after having passed the metal rolls 4 is less than 10 N/m, the laminate 7 may slack during transportation, causing the protective film 1 to go off the laminate 7 while the laminate 7 is being transported. When there are provided more than one pair of metal rolls, the "tension on the laminate 7 after having passed the metal rolls 4" refers to the tension on the laminate after the laminate has passed the last pair. After passing metal rolls, the laminate is hot and it may be difficult to measure tension. One can transport the laminate under a certain tension until the laminate cools down, before making measurement.

Amend the paragraph beginning on page 16 line 17 as follows:

The temperature at which the metal rolls 4 carries out thermal lamination is preferably higher than the glass transition temperature of the thermally fusing resin contained in the adhesive layer of the heat-resistant adhesive film 3 by 50°C or more, more preferably, higher than the glass transition temperature of the heat-resistant adhesive film 3 by 100°C or more for improved thermal lamination rate. If the adhesive layer contains thermosetting content, thermal lamination may be possible at lower temperatures than these temperatures, depending on thermal

lamination rate. The metal rolls 4 may be heated by a heat medium ~~circulate~~ circulating scheme, a hot air scheme, or a dielectric heating scheme, for example. The present invention is achieves excellent effects when the thermal lamination temperature is 300°C or more, preferably, 350°C or more.

Amend the paragraph beginning on page 19 line 15 as follows:

Next, the ~~roll~~ rolls were rotated, discharged, rid of foreign objects, and preheated. After that, the protective films, the copper foils, and the adhesive film were thermally laminated with the protective films 1 being wound half way around, and preheated by, the pair of metal rolls 4. The thermal lamination was carried out under the conditions listed in Table 1 (temperature: 360°C, linear pressure: 196 N/cm, thermal lamination rate: 1.5 m/min). The laminate 7, fabricated as above, had a five-layered structure in which a copper foil and a non-thermoplastic polyimide film were bonded in this order onto each surface of the adhesive film.